

ADDRESS

OF

EDWIN C. WILSON, Esq.,

DELIVERED BEFORE THE

Pennsylvania State Agricultural Society,

AT ITS SEVENTH ANNUAL EXHIBITION,


Held at Philadelphia, September 29, 30, and October 1, 2, 1857.



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“On motion of JAMES GOWEN, Esq., of Philadelphia,

“*Resolved*, That the thanks of the Pennsylvania State Agricultural Society are hereby tendered to EDWIN C. WILSON, for the able and practical Address just delivered, that a copy of it be requested for publication, and that two thousand copies be printed in pamphlet form for the use of the Society.”

From the Minutes:

R. C. WALKER, *Secretary*.

PHILADELPHIA, October 5, 1857.



## ADDRESS.

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*Ladies, Mr. President and Gentlemen:—*

I am profoundly sensible of the honor which has been accredited to me, in being selected as your Orator upon this interesting occasion. I am no Farmer ; my pursuits have been otherwise directed ; and my consenting to appear here to-day, was only in obedience to the strong interest which I take in public manifestations of this nature. I can only be general and discursive in my remarks—the details of Agricultural Science could not be furthered by a faint display of what little knowledge I have gathered from books and theory.—Your practical display of an intimate acquaintance with all these things, induces me into a significant silence.

It is a striking peculiarity in the people of this country, that whatever differences of opinion may from time to time be entertained among them upon subjects, political and religious, that still, on some occasions, we can one and all meet on common ground, and throwing aside all our prejudices, forgive and forget, and mingle together as members of one common family. And this unity of feeling, when the public good is at heart, is peculiarly exemplified on this occasion. The purposes that have called you together to-day, are high and noble. You have not assembled here at the call of the trumpet ! You came not to gaze on “the pride, pomp, and circumstance of glorious war !” You have not assembled here as partisans, to denounce or praise some political scheme of your law-makers ! You came not to celebrate a political victory ! You have a higher purpose, and a holier impulse ! You came here in a peaceful spirit, to consult with each other on those peaceful occupations and desires that are the honor and glory of any people.

It is on this auspicious day, when you have gathered the rich harvests of golden grain into your fold ; when the teeming fruits of the earth have yielded their abundance to your skill and industry ; when, with smiling faces and cheerful hearts, you have brought the finest specimens of both, and present them to an admiring world, as the best evidence of the manner in which you have improved God’s gift, and fulfilled His earliest commission, when He

“made man in His own image, and gave him dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth.” The earth was wild and untilled, and the first great command was issued to man to “*subdue it*,” to conquer it, and to make it yield to his skill and industry. This is one of the laws of our nature, and like all other immutable laws, whenever disregarded and broken, distress and sorrow follow in its path. The cultivation of the earth was the occupation of the patriarchs, and amid the confusion of a thousand changes in all things else, since those days, man still clings to the earth as his only means of subsistence, and has given to its cultivation a corresponding industry and attention.

The fruits of the earth are essential to the life of man, and of all else that live upon its bosom; and we can trace to its successful or unsuccessful cultivation, all that tends to make a nation either prosperous and happy, or miserable and degraded. And among the causes which contribute to the welfare of our species, either individually or in the aggregate, none can be mentioned more deeply interesting, than the productive industry of the people in Agriculture, the Science and the Arts.

While war was the chief occupation, and rapine the frequent amusement, of those who boasted themselves the chiefs of mankind—while the great names that are glorified in history were engaged in the conquest and pillage of nations, the industrious of all classes were little regarded, and were mainly employed as the servile ministers to pride, avarice or ambition. It was not until the “course of human events” had opened the eyes of mankind to the folly of attributing to martial exploits all the glory of this life—to the glowing absurdity of investing the mere soldier of fortune with supreme control over the lives and destinies of his fellow-beings, and to the monstrous injustice of placing those who essentially support and adorn society, in a degraded rank with respect to the other classes of their fellow-men. It was not until these great truths had gained some ascendancy over the prejudice of ages, that it began to be a matter of grave consideration how the interests of the industrial classes could be effectually served; how the tiller of the soil, and the tenant of the workshop, could be secure in the possession of those fruits of his toil which, by right, belong to him, and him alone.

The interests, conveniences, and wishes of a great majority of a nation, in days past, were not sufficient motives to induce their rulers to encourage the labors of industry. The paramount question with them was, how can the sinews of war, and the means of regal aggrandisement, be most plausibly, and with the least possible resistance, extracted from the hand of industry, and gathered into the royal coffers? But these things have given place, within the last century, to a state of affairs far more propitious to the general interests of society, more grateful to the feelings of the industrious, and more in accordance with the natural views of justice between man and man. And wherever

ivilization prevails ; wherever the popular mind is left free to exercise its own judgment, there will be found the contentment, the peace, and the joy that attends upon industry and its pursuits ; the delights of social life, and the constant safeguards of a free people, and securing the sure means of ample subsistence and perfect independence to every one who unites in his own character and conduct the qualities of industry, sobriety, perseverance and integrity.

It is indeed worthy of our special consideration, that while all other branches of industry seemed, for a time, only to flourish under the care of legislative protection and encouragement, the science of Agriculture was left to its own resources for improvement and extension. Societies were formed for the promotion of all things else but the scientific working and subduing of the soil, from which, as a common mother, springs all that is useful or beautiful in nature and art. On this subject, a duty attaches to the people of this country that belongs to no other. No people cover the same territorial extent, and have the same variety of climate ; none so uniform in language ; none so similar in their jurisprudence ; so analagous in their moral, religious and political habits. To a climate adapted to every production that courts the equatorial sun, or the polar cold, is added a facility of external and internal commerce, unparalleled in any region of the globe. There is no nation, ancient or modern, that can sustain a complete comparison. It is a high and responsible duty then, that rests upon the American people, that the science of Agriculture, the foundation and resource of all else that is useful and ornamental, shall receive an impetus from their hands commensurate with their greatness in other respects. And it is a proud thought for us, that Pennsylvania, the Keystone of the Federal Arch, and whose beautiful metropolis gave to the world the great axioms of freedom, is among the first to establish and organize in her midst, societies for the promotion and extension of the industry of the age : that her fields, workshops and furnaces, give evidence of a physical greatness that equals her moral power. She views the elevation of the Farmer and the Artisan, as the great and durable sources of our national happiness ; and may this thought be the " polar star " of our good old Commonwealth, her " pillar of cloud by day, and her pillar of fire by night."

This is the grand "*Saturnalia*" of our State society—the Goddess of Agriculture presides at the ceremonies, and all nature seems to smile with joy at the circumstances that have brought us together to-day—here we meet to worship the Great Author of the Universe, and like his ancient people, offer up to Him the fairest of our flocks, and the finest and most perfect specimens of the fruits of the earth. This is the *true* worship—this is the Great Church, of one tenet, of one doctrine, where all kindred, and people, and tongues can offer up a single prayer of thanksgiving to Him from whom cometh every perfect gift.

An independent position is the natural result of either personal or congre-



gated effort. In unity of purpose and action there is strength. An association of individuals for a common pursuit will develop the resources and advance the common project in a much greater degree, than can the labors of each individual, unaided by organized efforts. This society is formed for the purpose of improving the landed interest of our State and nation—of raising the tiller of the soil to an equal rank with him who conquers a nation—to diffuse and scatter abroad over the whole land the important results and benefits, which combined effort has given to Agriculture and its kindred pursuits. It is an institution expressly devoted to those practical sciences which concern the Farmer, the Mechanic, and the Manufacturer—it is a State institution for the obvious reasons, that the interests it seeks to promote are common to all its citizens. The rapid multiplication of County Agricultural Societies throughout our State and nation, furnish the most conclusive evidence of the high degree of approbation with which the laboring classes hail this new accession to their sources of usefulness, pleasure, and profit—it furnishes the community with the best Agriculturists and Artisans in every department, besides making men practical in their habits, rational in their tastes, less prone than formerly to crowd certain professions where success is at best doubtful, and more inclined to seek the substantial, rather than the fanciful distinctions and rewards of merit—it tends to the development of the national resources, and to the cultivation of a national self-respect. These societies are the posts and places, where instruction and common sense may recruit her ranks, and where the true interests of a free people may find its ablest and most effective supporters.

Such institutions should be permanently established and forever fostered in our Republic. Our national independence requires that the useful arts should be nourished and protected among us, and our feelings as men and citizens should impel us to strive for their continued success. In former days our people were mortified in the fact, that on the very thoroughfares of our internal commerce, nearly the whole superstructure was the production of foreign art—that while our hills and mountains contained ore of unsurpassed richness, accompanied by all the means required for their development and preparation, and only lying unheeded through the want of skill and enterprise, to bring them to a useful form—and were compelled to witness foreign locomotives bearing along gorgeous trains, belching forth their scorn at our want of self-respect and of patriotic pride—while we for a long time winked at these things, and the national discredit which they implied—yet Pennsylvania was the very first that threw off this bondage, and awoke to a sense of the fact that the scientific skill of her workmen were abundantly able to the erection of these great avenues of commerce, and to place upon them engines that have no rivals here or elsewhere—and whose whistles shriek defiance to all competition, as they dart through our valleys and over our mountain-tops,



dragging numberless trains, burdened with the productions of our soil and our workshops, with which to clothe and feed a world. All this has been done by organized effort—by societies like this—by the exemplification of what can be done by judicious perseverance and industry—and are examples for the imitation and instruction of all who would be wise in their vocation.

I am well aware that within the last ten years, the Farmer has done much to place his occupation in the position it must eventually occupy in the front rank of all human pursuits. A change, a great change has taken place in regard to this subject. Men are now seeking instruction—their energies are aroused—a very laudable emulation is excited, and men are making vigorous exertions for the credit of exhibiting the finest animals, and furnishing the best and largest crops of grain, as well as the credit and honor of being the best Farmers in the country. These Agricultural Fairs present every thing that is interesting from the rural resources of our land—have become the great holidays of the season, imparting useful instruction to all who may attend. The rising generation feel a more lively interest in these matters than their fathers, and there is reason to hope, that the next generation may have a more intimate and practical knowledge of the science of Agriculture than either.

The magnitude of agriculture cannot now be fully comprehended, nor its limits defined; it overshadows other interest, and under its wing they gather for support and encouragement—in every storm they fly to her for shelter and defence. Earth, as our common mother, nourishes and supports us all—in her bosom do we lay down and rest—when the toils of this life are over, she receives us with open arms, and hides us from care and sorrow, and in her portals are buried in oblivion the frailties of our nature. 'Tis well for us to be here,—'tis well for us to assemble together in contemplation of all these thoughts. The worship of nature is the worship of its creator—the fruits of the earth are His gifts, and to Him shall ascend the praise—without His guiding and parental hand, all our efforts are vain, for “though Paul may plant and Apollos may water, yet it is God alone who giveth us the increase.”

I will now endeavor to take a more logical view of this subject. A systematic discussion of Agriculture involves more time than I can spare, and more talent than I possess, and perhaps, would weary your patience more than would be profitable.

✓ 1. *The soil is the first element of wealth.*—The most imperious wants of man are those which relate to his sustenance and preservation. He must be fed, clothed and sheltered; all that he can appropriate to these uses is what he directly raises on the surface of the earth by his labor, or what he obtains from the recesses of her bosom; or indirectly what he procures from the animals nourished on the soil, and which contribute to both his food and labor. If man, at the moment of his creation, had been placed on a barren soil,

he must have perished of hunger. If the traveler in the desert of Africa lose his way, that arid region holds forth to him nothing but despair and death.

The soil not only feeds man, but supplies with inexhaustible prodigality those objects without number, which he appropriates to his equally numberless desires; but the soil does not provide all the objects of his necessities in the state in which they are used—nature has bestowed on him another benefaction, affording him genius and faculties by which he may exercise his invention and industry, to perfect and multiply his enjoyments, and man never appears more dignified than when he triumphs over the obstacles in his path by his genius and industry. This power to modify everything—to ingraft, as it were, a second creation upon the first, has progressively brought the arts to their present state of perfection, and made simple to our comprehension that which was apparently beyond its ken—and to us, in this age of invention, art has lost most of its sublimity, because we know not what it is to have been without what we have. We enjoy them as we enjoy the light of the firmament, without surprise and without thought from whence it came and how it is produced.

That soil is said to be rich which yields from its surface an ample annual product, and when from the bowels of the earth it yields abundant products applicable to the wants of man—the first description of production belongs more immediately to the preservation or subsistence of man, and which suffice for his animal wants—but he receives as a *man*, benefits from the other source, and it affords him likewise the uncounted means of multiplying his enjoyments. As man, therefore, consumes nothing but what has been originally extracted from the earth, or is nourished by its productions, the soil must be considered as the first element of the wealth of nations; but this soil, abandoned to itself, produces noxious weeds and tares, which kill those grains which are our ordinary nutriment. Production, without a directing and regulating hand, is a hideous chaos, and is like the motion of the locomotive with no engineer to guide it in its swift career, but with the skill and labor of man to control and manage the growth of vegetation, the earth smiles in beauty, order and abundance. The soil is the true source of all wealth, comfort and luxury—is the grand exchequer of the world, that honors all drafts, however large—it is the widow's cruise, always ready to supply our necessities.

This brings me to the second consideration, that *Labor is an essential element of a Nation's prosperity.*

It is indeed a rigorous law that man must labor—that by the “sweat of his face” he must earn his daily bread. The wants of man, that by the constitution of his nature, are many, cannot be satisfied in any way else but by labor. Man labors, therefore, because it is necessary that he should do so, but the power which establishes the necessity, parental even when it chastises, has so ordained that his happiness shall spring from that which would

appear to be his misfortune. As he labors and produces, and still further exercises his skill and ingenuity upon the raw material, making new fabrics for his comfort and enjoyment, in the same proportion is his happiness increased. The law of our creator is the law of our being, and as we approximate to its requirements, no matter how burdensome they may seem to be, so much nearer do we reach that perfection which is the only true happiness here, and leads hereafter to that land of

“ Sweet fields arrayed in living green,  
And rivers of delight.”

In the early stages of society, all labor was directed to the cultivation of the soil, as a means of mere subsistence. But the wants of man are not confined to the mere desire for food, nor do the labors of the field command the whole time of the cultivator. Other wants led to other efforts, and design and chance have directed the attention of different persons to different objects—thus were unfolded faculties unpractised before, and gave rise to multitudes of discoveries, arts and professions. At first, every man performed all of his own services, and supplied all his own wants, but the labors and ingenuity of many became at length more advantageous, by affording a greater quantity, and a more perfect quality of the things conducive to enjoyment. The advantages between one and the other enlarged with this augmentation of productive experience and capacity—and thus commerce grew and swelled and was the consequent development of an infinite variety of ingenuity and labor.

This is the natural and consequent and constant progression of society towards wealth, which consists of all that man draws from the soil, and of all that tends to utility and comfort which he adds by his skill and labor to its products. The labor of man bestowed on the cultivation and improvement of the soil, has no other bounds than the genius of man, and that has no limits at all. When this genius shall have full force and effect upon well directed labor, new facts in philosophy, the arts and sciences, will come forth to startle the world—the wilderness will be made to “blossom as the rose”—the whole land will be a new garden of Eden, in which mankind will live, until his own nature is redeemed, and we shall be, as Adam was, before the tempter came to place a barrier between him and his Maker. The glory of its creation will be fully shown—its beauty fully developed. With this labor, it gives clay to the potter—marble to the builder—gems and gold to the miner—food and raiment to man—it gives drink and shade, and fuel, fruits, odors and flowers.

Every thing in the United States presents the satisfactory assurance that we possess the means of independence and happiness, if we make the proper use of them, and guard against the abuses which may proceed from internal as well as external causes. All these objects which constitute happiness are



abundantly within our reach, and our true interest is so to direct our labor and manage our resources, that we shall not be dependent on others for that which we possess within ourselves, and which are secured to the citizen by the excellence of the government which protects us.

Labor, manual and intellectual labor—is the source of wealth to those who use it. The trees of the forest no doubt grow without the aid of man—the rivers flow without his guidance—and the sunshine which is essential to animal and vegetable life, is independent of his labor—but it is by the aid of labor and art that they are brought into use in agricultural and mechanical pursuits—and it is by the exchanges of the products of the various modifications of manual and intellectual labor, that society is provided with the rich abundance and diversity which constitute the rational enjoyments of mankind, and makes the security of the social state the perfection of human happiness. It is in the very nature of society that the arts and sciences grow up together; that the Manufacturer, the Agriculturist, the Mechanic, and the Man of Science, find in each others pursuit, the help-mate of his own—that their interests are mutual, and their profits identical.

When I say that the wealth of a nation consists in the amount and product of its labor, I do not wish to be understood as meaning that it is merely the labor of the *hands*. Without the head to direct, plan and arrange, the hands can do nothing right. The superiority of the head over the hand is the very first principle of civilization, and the degree of intelligence which is required, in a particular pursuit or profession, has at all times been the measure of consideration in which it has been held. Manual and intellectual labor cannot be separated—they are brothers, and like the Siamese twins, are bound by ligaments, which if severed, will cause the decline and death of both. The engineer with his mathematical instruments must precede the laborer with his axe and shovel—his level and compass must mark out the path of the locomotive over and through the mountain, before the mere hand of labor is employed to cut it down or pierce through its vitals. The intellect is the *soul* of man, and it is this immortal part that must ever rule and control the mere physical energies of our human nature—its genius must be the ruling spirit in the formation and growth of philosophy, the science and the arts. Human labor, guided by the judgment and reason of the head, must accomplish all that it proposes—must subdue all that obstruct its path—must conquer all that defies its power, and that nation, and that people which uses its intellect in the formation of its government, in the labor of its people, in the progress of its arts and sciences, in the improvement of the gifts of nature that lay around in rich profusion—will be the people that shall know no rival—shall dictate laws and government to the rest of the world, and where, like queen Sheba, kings, princes, monarchs and potentates, shall eagerly hasten, to learn those things which has made it great and prosperous, and from whence shall flow

o a grateful world those true axioms of labor, and love, and wisdom, it has  
o fortunately followed and obeyed.

o If he who tills the soil would do so with success, he must consult the man  
f science who has analyzed its parts, and who alone can instruct him how  
nd when his labor must be conducted. The man who is bronzed with daily  
oil, and the pale faced student of cheimistry, are equally dependent on each  
other ; the one for food and raiment ; the other for the knowledge how to  
produce it. Of what use would be the fleece of the sheep, or the cotton of the  
field, without the loom of the manufacturer, and the genius of the Mechanic.  
Between the Agriculturist and the Mechanic of our common country, there is a  
covenant so advantageous to both, that it cannot be broken. The advancement  
of one interest is necessarily followed up by a corresponding progression of the  
other ; the mill wheels of a manufacturing district can only revolve with  
profit as the raw material is furnished by the agricultural supplies.

Permit me to say here, in this connection, that your Farmers' High School,  
established by your Legislature, aided by private donations, and largely aided  
by this society, both deserves and needs your fostering care. It is peculiarly  
the institution of the Farmer ; it was established for his benefit, and to him it  
looks for that support and encouragement which its importance demands. In-  
side of its fences the youth will be taught the use of the plough ; from its por-  
tals will go out among you the learned and scientific Agriculturist, having a  
diploma certifying not his refined learning in gibberish tongues, but that he  
understands the common and useful things of this life ; that he has learned the  
art of producing something conducive to the real and honest prosperity of his  
country ; that the true wealth and happiness of the human race depends upon  
the well directed and intelligent labor of the Farmer. This school is yet in its  
infancy ; the Farmers must nurse the child a little while, until its youth is  
fairly passed, and manhood begins, then will be seen a giant out of whose  
hands shall be scattered far and wide the seeds of peace and plenty ; then will  
the educated Farmer take his stand among the wise of the earth, and he will  
cease to look to the Lawyer for his politics, to the Politician for his patriotism,  
or to the Fanatic for his religion. Look around you where you will, you always  
find that an educated Farmer is held in the highest esteem in the community  
where he resides. He is the great man in the sphere in which he moves ; is  
the squire of his district, or is the legislator of his county. Let what reverses  
may come upon our common country, the resources left to us from the produc-  
tions of the intelligent labor of the Farmer buoys us up amid the storm, and  
guides us, though shattered, yet safely, to a welcome harbor. Though banks  
break, and suspend ; though paper money becomes as rotten as the rags from  
which it came, yet in the fields and barns all over our happy land, we have the  
great *Bank*, established by God himself, which no human effort can break and  
destroy. It is the life of the world ; the pulse of the nation ; the life-blood

that sustains us all. Chesnut street in all its glory is not arrayed as one of these; its glare and glitter is but the scintillations of the threshing machine and the plough. Without you, it is like a candle without a wick. It is eminently proper then to establish a school where is taught the great profession of the age—the great science that, like Aaron's rod, receives the humble adoration of all others.

We have before us not only what the earth directly produces in infinite variety, but the Manufacturer shews us the beautiful fabrics which he has made from the raw material grown upon its soil; the Mechanic exhibits ingenius and wonderful machines to lighten and extend the labor of the Farmer and the Artisan; the arts and sciences contribute their share in the beautiful creations of their skill and taste; the combined spectacle is the triumph of intellectual labor directed with judgment, and accomplished with ease and perseverance. New facts are stated, and new developments are made in every department, by these comparisons of the products of labor; intelligent workmen are instructed anew in their pursuits, and they return to the field and workshop with renewed spirits, and brightened hopes of the future.

This is a progressive age, and amid the rush of thousands in their onward progress, the cultivators of the soil are invited to take their place in the race, and with equal footsteps to keep pace with the great and rapid strides of improvement the world now exhibits. How do you expect Farmers and Agriculturists to keep step with the rapid music of a thousand changes? With what weapons will you fight this battle of progress? What chariot will you ride in to keep up with the giant efforts of steam and the lightning? Shall science outstrip you, or will you influence her to stop at your side, and shower over your fields and crops the tribute that shall make you rich? You know the old adage, "make hay while the sun shines." With a quick eye and determined heart you must take advantage of the propitious moment! You must seize upon all and every thing that relates to your calling, to make your election sure! Experience, with her thousand volumes, is spread before you—read and ponder well the lessons it teaches. Science, with its vivid discoveries, is presented to your consideration—apply it to your industry. Art, with its manifold effusions, lies within your reach—in your hands it will be both useful and ornamental.

I tell you that a great principle is involved in the science of Agriculture, which reaches through indefinite generations, and forms the basis of all possible improvements, and of the highest hopes of our race. As a community of Farmers, is it not time that you woke up, and with eyes wide open, make anxious inquiries by what *means*, and on what *terms* the fruitfulness of the earth, and the health and vigor of its invaluable products may be forever maintained? These are questions of universal concernment, to the careful and rigid investigation of which the Agriculturist should at least lend a listening ear. He



who "makes a blade of grass grow where it never grew before," is said to be a public benefactor; and he that produces *something*, either in agriculture, mechanics, or manufactures, or in the professions, is a good citizen, while the loafer, who consumes the bread of idleness, is a mere incubus in the land, a burden to himself and his friends.

There is any amount of mental ability among the cultivators of the soil, but there is great want of the necessary information to give proper direction to the intellect and energy now employed in agricultural pursuits. Our means of spreading knowledge on this subject is perhaps adequate to the known wants of the country; but the supply is equal to the demand. The application of steam to printing multiplies numberless copies of any particular book, and where thousands of works on Agricultural science are now circulated, there should be millions. Every Farmer, and every workman in his employ, should be supplied with plans, explanations and suggestions, in relation to his occupation; and the press, if applied to, can give the desired relief, both quickly and cheaply. The almanac and the spelling-book, both well enough in their way, are oftentimes the only books to be found on the Farmer's shelf. He exhibits an apathy and a dislike to useful literature, that is strange and wonderful. His crops grow, but he cannot explain the phenomenon; his grass withereth before it is ready for the scythe, but he knows not the cause; his trees blossom and give promise of abundance, but the fruit comes not to perfection; he understands neither the defect nor the remedy; his cattle sicken and die, but he can administer no relief. What proportion of our Farmers can tell why ashes are more valuable as a manure on one soil than on another? or why lime is a fertilizer on one soil and not on another? What combination of materials will make the cheapest and best manure? What is the proper depth of ploughing, and what is the advantage of subsoil ploughing? Is this kind of ploughing equally beneficial upon different kinds of soil, and why? Do plants receive the whole of their nourishment from the soil, or part from the atmosphere, and what from each? Of the solutions of manures which filter downwards, or of those which rise as gases, what portions escape into the atmosphere, and what portion is absorbed by the plants? What breed of cattle, horses, or sheep are best for the Farmer? What grain will pay best in a certain kind of soil? Why is clover a good manure? This list of interrogatories might be extended a great length, but who can answer the few that I have put? What farmer so understands his business, as to be enabled to give reasons for his action, as the judge on the bench gives reasons for his decision? I know there are some among us who rail out indiscriminately against science and theory being applied to Agriculture or any thing else, and denounce all that is said or printed on this subject, as mere humbug and nonsense. This society and similar organizations, will serve as hospitals for the reception of just such persons; their ignorance will be enlightened by the magnificent spe-

cimens of a nation's skill and industry, presented to their astonished vision. Like the disbelieving apostle, we will thrust their very hands on the results around them, demonstrating their delusion, opening their eyes, and removing their incredulity. "Facts are stubborn things," and every new discovery but adds to the pyramid already built, which neither the skeptic or unbeliever can either injure or destroy.

It is a too common error to suppose that scientific knowledge is of no value to the Farmer, and to the great mass of our citizens. So far from this being a correct view, there is scarcely a subject within the whole range of science, but is of infinite importance for them to study and understand.

*Anatomy*, that teaches us the beautiful, complicated and harmonious structure of our own system. *Astronomy*, that teaches us the infinitude of the material universe, and thus unfolds to us the goodness, wisdom and power of the Creator. *Geology*, that teaches us the elements that compose the earth we live on, and the uses and applications of these elements to the production of the necessities of life. *Chemistry*, that analyses all material things, and teaches us the varied and useful combinations in organic and inorganic matter. *Botany*, that unfolds the wonders and beauties of the vegetable world, with the laws that govern each individual production. Can it be supposed that the knowledge of these highly interesting, instructive and useful subjects can be of no importance to the man who cultivates the soil? A rich field is here opened to the expansion and enjoyment of the intellectual faculties, and for the application of the laws that govern the universe in the production of the comforts and necessities of life. Knowledge like this, diffused to all, is the medium through which the physical and moral world must be renovated; and being ordained to govern the material world, must be observed and applied, must be known and obeyed, in order that we may reap the rich treasures of material things so abundantly scattered all over our land, and are within the reach of the smallest means.

The census returns of 1850 show that the annual value of the products of the soil of the United States was then over *sixteen hundred millions of dollars*. What a vast amount of capital is employed in this single pursuit, and large as it was then, or now is, it must increase as our country is opened up and developed, occupied and improved, and the number of persons engaged in it and kindred pursuits must also increase—the world of science and art are forming into battalions to aid these millions of men—this grand army of Agriculturists in a wise and systematic prosecution of their calling. But in all this there must be an interchange of feeling and action—the tiller of the soil must rest from his labors awhile and listen to the words of wisdom—the Farmer must be as eager to receive advice and instruction, as the man of science is to impart it. The theories presented by the philosopher, must be reduced to practice by the Agriculturist—the suggestions of experience are to be received and cherished

ly him as the foundation of success—the results of practical operations are adopted as axioms for direction and guidance. All these matters are systematically proper for the study and information of him who follows the plough, sows the grain, and cures the grass. The records of science and art are open for his inspection, that will teach him the loftiness of his vocation, place him among the princes of the earth, and the nobles of the land. In his hands rest the golden bowl, and he must take care that it be not broken, as all the crueible are tested all those products of nature which relate to our sustenance, clothing and shelter; in his intelligence rests the life of the world; in his industry rests the luxuries and comforts of social life. A vast extent of country is open to his vocation! Prairie and mountain, forest and valley, in alternate succession for three thousand miles, present a field of operation to the Farmer, grand in its features and magnificent in its beauty. This is the mighty workshop of the Agriculturist, and his duty is to occupy it, and by his labor make it yield to the necessities and desires of the human race. Do you think he fully comprehends the importance of this mission? Can he appreciate the immensity of his possession? Nothing but intelligent labor will sustain the responsibility of his position! Nothing but energy and perseverance will enable us to accomplish our destiny. A due appreciation of our advantages will enable us to work with zeal, and enable us to be faithful to our duty.

Other nations are confined and limited in their productions, but we have a latitude ranging from twenty-five to forty-nine degrees of latitude, embracing almost every range of climate from the frozen regions of the north to that of perennial Summer, in which will flourish the products of every climate. Tea and coffee may be cultivated in this country in the highest degree of perfection, and their successful introduction would not only increase our wealth, but we could enjoy those balmy beverages in their purity, promoting both our comfort and our health. There are numerous other products of foreign countries that might be profitably and beneficially cultivated here. Increased knowledge in relation to them will not only increase the varieties of the products of the earth amongst us, but will also increase the number and vastly improve them in quality. The Farmer is especially interested in increasing the variety as well as the quantity of his products, for by improving the quality, he increases the price, and in increasing his varieties, he extends the fields of his operations.

An extended intercourse and acquaintance with the fruits, grains and vegetables of foreign nations, is of vast importance to us, who can grow them all, nearly so. Let us examine and see how far we are already indebted to foreign lands for many of our most valuable products. *Wheat and Rye* are now growing wild in Siberia, and on the borders of the Caspian sea. *Rice* has been obtained from the fertile and sickly plains of Ethiopia. *Buckwheat*



comes to us from the savage lands of Tartary. *Tomatoes* from the shore of the mighty Amazon, in Brazil. *Cotton*, the fabrics of which now clothe and beautify nearly all the inhabitants of the globe, is a native of *Siam*. The *peach and plum* we have received from Persia. The common apple tree is also a native of the Eastern hemisphere. It was the crab-apple, and the many varieties we now have of that delicious fruit, were developed by grafting. Pliny gives us many facts connected with its cultivation, and says that in early days, about fifty years after Christ, there were some trees in the villas in the city of Rome, which yielded more profit than a small farm, and which brought about the invention of grafting. Apples were introduced into the North American colonies in 1629, by order of the Governor and company of the Massachusetts Bay, in New England. Apples were cultivated near Boston, by the Pilgrims, soon after their arrival, and some of the original trees were standing there up to within a few years. To Massachusetts are we indebted for the Baldwin apple—it originated in Wilmington, near Boston, more than a century ago. The first orchard planted in Rhode Island was in Pawtucket, in 1636. The apple was planted in Connecticut at Hartford, previous to the year 1645, and an ancient tree is still standing in that city which was brought from England more than two hundred years ago. The common apple was grafted in Virginia in 1647. A tree, sent from England about a century ago by Lord Baltimore, is now standing in full vigor at Mt. Airy, Prince George's county, Maryland. The original "Newton Pippin" tree is said to have been the spontaneous production of a seed near a swamp near Newton, Long Island, New York, more than one hundred and fifty years ago. The good old tree died when about one hundred years old, from excessive cutting and exhaustion, and engrafted trees of it are still extant, which have been standing beyond the memory of man. This fine fruit has been cultivated on this continent with great success, and we have a wide-world celebrity for our excellent apples and "Jersey Cider."

The *horse* is a native of the wild plains of Arabia, and is also found in the wild, picturesque and fertile mountains of Circassia. The wild horses that roam the extensive plains of South America, are supposed to have been introduced by the Spanish *filibusters*, who sought the shores of the new world hundreds of years ago for pillage and conquest. Our valuable *cattle* have been derived from Europe and Asia, and the *goat* from the beautiful mountains of Switzerland.

The *potato*, that valuable esculent, the demand for which, in later years, has made it a luxury, is a native of this country. It was discovered by Europeans in its native state, in the mountainous regions of South America, near Quito, where it still exists. How it found its way to Virginia from that place is unknown, but from Virginia it was carried to England by Sir Walter Raleigh, in 1586, and was first planted in Europe by Raleigh, on his estate near

let, in Ireland, and from thence spread over Europe, a new variety spring-  
 up in almost every change of soil or climate. In the early stages of its  
 production, as an article of food, it was looked on with suspicion and doubt,  
 and there were but few to do it reverence; now its votaries are numbered by  
 millions, and a failure in its crop makes "countless thousands" mourn. In  
 seeing the life of Frederick the Great of Prussia, I came across the fact, that  
 in 1745, this king, with the wisdom and forethought for which he stood pre-  
 eminent, endeavored to introduce the potato in his kingdom, and it is in-  
 credible what trouble the diffusion of this root gave to the authorities of that  
 country. His predecessor had applied it to the subsistence of the paupers, and  
 was sick in the *Charite* of Berlin, and gave that institution a piece of ground  
 for its cultivation, which was the first place in Germany where it was raised.  
 The people, however, gave it a cold reception, and Frederick, finding example  
 of no effect, was fain to employ force for the furtherance of his object. He  
 sent overseers to instruct the people how to plant and raise it; but it was many  
 years before its cultivation spread through his kingdom, and not until his  
 subjects were compelled to receive it by criminal enactments. The dearth in  
 the years 1770 and 1771, however, put an end to what was called the potato  
 war, and rendered sermons and legislative enactments in recommendation of  
 the useful vegetable entirely superfluous. So great was the love of this illus-  
 trious monarch, for all that appertained to Agriculture, that he erected cele-  
 brated hothouses at Potsdam in which he raised many previously unknown spe-  
 cies of fruits, which gradually found their way into general use, and in this  
 manner the melon and the pine-apple and the peach, gradually became more  
 common. Various edicts from his pen enjoined the cultivation of fruit trees,  
 and according to one issued in 1756, the highroads of his kingdom were to be  
 bordered with them on both sides. He consolidated the loose sands by sowing  
 them with pine seed, and enclosing them with hedges. He encouraged all  
 improved methods and processes. He sent experienced Agriculturists to travel  
 at his expense in Holland, England and other lands, and the convents and re-  
 ligious societies of Silesia were bound to make improvements in their extensive  
 possessions, and the newly elected abbots were not confirmed in their direc-  
 tion, until they had sworn "to plant vines, oaks, mulberry trees, and pota-  
 toes, to keep bees, to separate the long-wooled sheep from the others, and to  
 import East Friedland cows;" and he took good care that they kept their oath.  
 He was a farmer-king, and now, one hundred years after, Prussia, by these  
 well laid foundations, stands pre-eminent on the continent of Europe, for her  
 civilization, her products, and her common schools. What he did then, as  
 sovereign of his land, is a bright example to you, as the sovereigns of this  
 country. By your industry and skill you can fill the land you live in, with  
 joys and comforts of an extended cultivation—literally to overrun it with  
 milk and honey, for the world to come and feed upon. A stout heart and de-

terminated spirit can accomplish it all. God has given to man a hand to toil and a mind to direct it. The working hand and the thinking mind must act together, and where this is so, his energies will be increased, and harmony of action obtained. It is a great error to suppose that the masses were made to toil, and a favored few to think and direct the energies of all. God had no such intention. To all he gave the active limbs and the thinking brain, and he will require a strict account how he has managed them both. Knowledge sustained by labor, leads to life, health and happiness; ignorance and sloth lead to disease and death.

Without labor, of what value is our vast public domain? Of what interest is the possession of the millions of acres that lie between us and the setting sun? If our valleys were silver, and our hills were gold, the earth would not be one mite the richer, without labor in their development. The policy of our government in relation to the public lands is, to extend our jurisdiction over it, to increase its population, to produce the staple commodities required by the country, and to extend our principles, and its power, over the whole. This policy can only be carried out by the help of labor. The brawny arm of the intelligent Farmer must be bared, to give practical effect to this rational design. It is the mission of the Farmer to extend the freedom and civilization of the age from sea to sea; to build up the forest and prairie with great State to unite our people in the great bond of universal prosperity, with one sentiment, one feeling, and one interest, which neither distance nor time can obliterate, having but one political creed, the enduring perpetuity of the Union and confederacy of free States, washed by the shores of both oceans.

The next half century will witness the realization of this idea. "Westward the Star of Empire wends its way." A rushing, mighty throng, of the bone and sinew of the old world and the new, are pushing their way to the free west, and are settling down on our lands as the busy bee swarms among the flowers of the field. It is a great *thirst* after land, which has been the great desire and strife of the human heart from the days of the patriarch Abraham. And no wonder—it is the great patent of nobility to all men—has been a part and parcel of the distinctions attached to aristocratic titles in Europe; but the owner of the soil in this country is a real lord—a *land-lord*—a title above all others, and one which, like the dews of Heaven, descends upon all alike. He is the monarch of his possessions, the "lord of the soil," owing fealty to none but to the "King of Kings, and Lord of Lords." Peace and order are the instincts of such men, and love of country their patriotism. Their homes, stretching across our land from the eastern ocean to the western more durable than the wall of China, present the formidable barrier against all principles, except those that lie at the foundation of human freedom. It is the land where the *label*, which aristocracy has attached to the man who labor has been blotted out, and where is beheld nothing but the impression of God



hand upon him, sustaining and assisting him in all his pursuits. Here, he is as much the "sovereign," when he shoulders his rifle, making the forest his home, as the man who lives in splendor and luxury in the midst of civilization; and when his rough hand places his "ballot" in the box, it is as potent as the same deposit, when placed there by the soft hand of pride and indolence.

The science of Agriculture is denied by many, to be susceptible of much, if any improvement. This is a fallacy—a shameless fabrication—an invention of him who goes about like a roaring lion. It is true, the individuals engaged in this occupation are spread over a vast extent of country, and consequently cannot have that intimate intercourse which those engaged in other industrial pursuits have. But this is no reason why a Farmer's knowledge must be bounded by the limits of his own fences—his own vision, or even to his own country. In "knowledge there is power." It is the lever that governs the material and moral world, and is as essential to the Farmer, as any one else. It has reduced chemical science to practical purposes and applications. It has applied mechanical force to the levelling of the forest, and has ameliorated the severe labors of the field. It has brought immense wealth from the bowels of the earth, where it had slumbered for numberless ages. It has harnessed the lightning of Heaven, to send messages of affection to loved ones afar off, and to speed the operations of commerce between distant nations and communities. It has sped the locomotive on its errant westward, to wake up the sleeping prairie, and to lighten the dark paths of the trembling forest. It has extended and multiplied the products of the earth beyond all calculation, and the knowledge that has produced all this, forsooth, must be denied the Farmer; he must, of all others, remain ignorant of the great purposes of this life; he, alone, must not enjoy the pleasure of intelligence; he must remain on a level with his oxen, staring and wondering, like them, at the startling improvements around him! It is an aristocratic sentiment, unfit for this age and for this people. It can have no abiding place here. The barriers that ignorance and oppression erected between the hand of the laborer, and the cultivation of his head, are broken down and scattered to the winds. Knowledge and truth are triumphant, and the jubilee in their praise shall ascend from our fields and workshops, until "time shall be no more."

The erection of an independent empire in the Western Hemisphere constitutes an event which is intimately connected with the future destinies and happiness of the human race. To build up the solid foundations of its greatness was the work of a generation that has passed away; the elevation of the superstructure is the duty of the men of the present age—a duty not less onerous in obligation than arduous in performance. Let us then endeavor so to direct the industry of our people—let the labor of its citizens be so interwoven—let the interests of all classes be so identified that nothing can break or sever these ties; that the superstructure we erect shall be worthy of those who laid its

corner stone; that it will be large, and beautiful, and strong—so strong that when the storms of human strife shall rage around it, it will stand as did the house that was built upon a rock. That superstructure is building. A nation of architects, day by day, are raising it higher and higher, and when completed, like the temple of Solomon, it will be the wonder and admiration of an astonished world.

The hand of progress is laid upon our shoulders, impelling us forward with lightning speed. We cannot stop in our onward march if we would. The laggard who drops will be trampled to dust by the crowd behind him. We have brushed away, as cobwebs, the superstitions, ignorance and tradition of ages. In our progress we have left old “worn out Europe” far behind us, and baptized a new race in the waves of both great oceans. We have leaped across the mighty waters, and are running the race that is before us in the golden wake of the setting sun. Progress is our *watch-word*; that progress which the denizens of the Eastern world would never understand until the astounding definition was sent back to them in the shrill whistle of Fulton’s steamers; in the flash of lightning intimated by the genius of our own FRANKLIN. The reaping machines of M’Cormick and Manny are the compliments of Young America to the Old Fogies of Europe. In the exhibition at the World’s Fair in London, while other nations exhibited their wealth in furs, diamonds, and in articles of regal magnificence and luxury, we alone were there with the exhibitions of “unfettered and unpatronized” labor, and in all that constituted real progress and honest industry, we bore away the palm from the world. In those branches of physics most essential to mankind, America may take precedence of all countries in the amount of invention and improvement which she has furnished mankind. In this she stands, and will ever be, pre-eminent. It is her destiny to be so. The free system of her laws, and the genius of her free institutions, unfetters the mind from the dull routine that custom and precedent threw around it; it lives in a new element, and has a new scope for its hitherto untried powers; new thoughts are called forth, opening up new pursuits, and new avenues for the exercise of her strength and power. It is this freedom from all that wearies the body and confines the soul, that constitutes this people the great Commonwealth of the world. The Farmers are the *giants* who live in it; who rule it; who make its laws, and who control the machinery of its government. May their intelligence be commensurate with their power and influence.

The strength, the power and the dignity of a nation depend upon the number of her Landholders—upon her Farmers, upon her Agriculturists. Every waving field of grain, every teeming barn, every meadow, every hill covered with its cattle, exhibits the strength and power of the people to whom they belong. In those countries where the Landholders are few, where he who works the soil is but a tenant, have neither freedom, peace, nor happiness—

the sweat that trickles from the brow of the laborer in the field, waters a soil that is not his own—the land he tills, and the house he lives in, are anothers, he works for mere subsistence—to him the progress of his country and the pride of her wealth are as nothing—he has no *home* in its borders, and there is nothing to touch his heart and engage his affections—he lives and dies like his fathers before him, a mere serf to some lordly owner—and the few feet of earth that gives him a last resting place, and hides him from this oppression, is all that he ever possesses. ^

But here, on this western continent, a different state of things is established and ordained. A nation of Farmers have their homes in this land—the orisons of nineteen millions of freemen engaged in Agriculture ascend night and morning unto the Most High, and in their prayers and worship is the great safeguard of our nation's integrity and honor. ✓ The citizens of this country are also the owners of the soil—they are part and parcel of the confederacy—the bone and marrow of its structure—on the tops of our mountains and in the depths of our valleys, in the harvest-field and threshing barn are the strong arms of our nation, the pride of our republic, and the hope of the world. In the hearts of our Farmers is to be found that freedom of thought, that independence of spirit, that love of virtue and truth, that shall stand as ramparts against the world, in the defence of our civil and religious institutions. To them, in the hour of danger and peril do we look for encouragement and defence. When “grim visaged war” with wrinkled front, shall pour down its legions on our devoted country, these men of the plough will fill the ranks of the army. There are none else who can do it so well! Reared in toil and industry, his whole frame is developed in its muscle—he knows no fear, but with the courage of a lion he seeks the “tented field,” and rushes, without reserve, into the serried ranks of the enemies of his country.—Experience has proved that he who wields the flail, can also wield the sword; and that he who tills the soil, not only can, but will defend his home and his country.

Nowhere in the wide world, but here, was ever witnessed such a glorious pageant, so grand a scene as this—the ancient Greeks, once in four years, met to celebrate the Olympic games—the Roman people were wont to crowd the streets of that ancient city to meet the conquering hero returning in triumph from the wars—absurd national amusements were the pastimes of the nations of antiquity, and even many of modern times—but it was reserved for the American people, in a land not then known to be in existence, to celebrate periodically the march of industry—the advancement of the arts and sciences, and the free government which secures to each and every one the results of his own labor. On the Farmers, Artisans, and Mechanics of this land rests the responsibility of the continuance of the scenes of this week. This land, that is large enough to contain and support in ease and affluence five



hundred millions of people, is in the guardianship of the farming interest of this nation.

The eyes of the world are upon us—great as we assume to be, yet many believe it to be an evanescent growth, a mere scintillation of greatness that will die out with the events that send it forth—an unnatural expansion that will contract in the process of time. But while our people are industrious—while labor secures its proper reward—while justice to all men shall be the ruling principle of our lives—while virtue remains implanted in the hearts of our people—while the golden rule is embodied in our government, and in the Society over which it watches, so long shall we be a great and prosperous nation.

The pleasant scenes that have surrounded me since I came to this beautiful city (the pride and boast of our Commonwealth) and visited this fair, have caused emotions of pride and joy I have never felt before. With the egotism of the Roman, I can pride myself that I am a citizen of this fair land—that my lot has been cast in “pleasant places, and along still waters.” I look forward in bright anticipation of the future eminence we are to attain through the industry and intelligence of the masses of our people—I look at our broad lands stretching from the Atlantic to the Pacific, from the Penobscot to the Gila, and at the wealth that must inevitably be the lot of its cultivation—and while we are to stand in a national point of view as a bright and shining light to all the world, straining my vision to futurity, I see these lands swarming with inhabitants from all the nations of the earth—I see them mingling together in social intercourse, a busy throng, striving and pushing onward the great truths of liberty and freedom—in all this I see happiness, contentment and joy.

To the hard-fisted yeomanry of the land—to the Farmer, the Artisan, and the Mechanic—to you who control the ballot-box, the great lever of our government, allow me to ask you one and all—are we to bid this bright vision vanish? Must we hasten to disabuse the world of any further hope of such a system? Have we only drawn upon us the eyes of all nations that we may be doubly shameful? Are we to “lay down the shovel and the hoe,” and indulging in indolence, become as Babylon and Carthage?

Future generations will be told of our industry, our ingenuity, and our celebrations of festivals such as this of to-day; they will read of the exploits of our infant state—they will learn that her children won the broad lands of the west from the sullen savage—that they baffled his wiles, tamed his spirit, and subdued his obstinacy. They will learn that the skill and invention of our early days gave promise of a glorious future! And while they admire the endurance, the chivalrous valor, and the romantic enterprise of her sons, shall they sigh at the thought that her after destiny redeemed not the promise of

er younger days? Shall our history impress them with the thought that a vigorous youth is no protection from decay—that idleness has either degraded our nature, or that luxury has destroyed our virtue?

Pennsylvania stands in the front rank as a State, possessing within its borders every constituent of wealth and prosperity. We have noble rivers bearing upon their bosoms the products and commerce flowing from the industry of her people. We have coal, and wood, and iron in all parts of the Commonwealth in grand profusion. We have a soil peculiarly adapted to all kinds of agricultural pursuits. We have springs of gushing waters from our hills and mountains as sweet and pure as that which Moses forced from the rock. The hum of our manufactories is the industrial music of every valley—the hammer, the plough and the spade are never idle. Every year exhibits substantial improvements pervading every branch of labor. Every day brings forward new relations, and if we lag not in this, the noon-day of our prosperity, we shall surely reach that high destiny of which we are now scarcely conscious. The present is full of promise, and the future of hope and expectation.

But our privileges are as “sounding brass, and a tinkling cymbal,” without the spirit and determination to use them. There is nothing on earth that can resist energy and determination—with it for our weapon we can conquer all obstacles—we can set the heel upon all difficulties—we can triumph over our own defects, and can always supply our own wants. I know that the history of Pennsylvania is the record of an energetic people, and that from the moment when the great truths of freedom were promulgated from her beautiful metropolis, that she has never departed from the text, nor deserted the theories of the Declaration of 1776. Her patriotic chronicles—her giant manufactures—her immense population—her influence in the moral and political world; her teeming fields and groaning barns make her as “the city set upon a hill, whose light cannot be hid”—it streams far away into the distance, gilding with bright memories the declining days of thousands of her children, who have made their homes in the forests and prairies of our western domain.

But while we believe there is no land between Pennsylvania and the Pacific that can be held in comparison; that no State will ever be built that can rival the Keystone, and that none is so rich in agricultural and mineral wealth as the land of Penn, we should remember that to whom much is given from him shall much be required—that we must not bury our talent in the earth, but with care, economy and industry add to our stores of wealth, knowledge and happiness.

Our precept and example are the lessons that are learned and followed by thousands. This Commonwealth is, (as it were,) a towering “light house,” pointing out the true path in the great ocean of progress. Let us then in view

of our own destiny—in the contemplation of our influence upon others, exert our energies in working out the great problem of human happiness—let us strive to be *first* in all that is useful and ornamental—then our prosperity shall never cease—our horizon never be clouded—our faith and endurance never shaken.





